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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,194	03/31/2005	Nathan James John Selby	SOMMR-014US	8676

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STETINA BRUNDA GARRED & BRUCKER  
75 ENTERPRISE, SUITE 250  
ALISO VIEJO, CA 92656

EXAMINER
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LEE JR, KENNETH B

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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11/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/511,194

**Applicant(s)**

SELBY ET AL.

**Examiner**

Kenneth B. Lee

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8 and 10-19 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 5-7, 11-14, 16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higbee (EP 0987616 A2) in view of Bidiville et al., US Patent #6,218,659 B1.

Regarding claim 1, Higbee discloses an electronic pointing device with a first and second housing (Column 2, lines 23-28). Higbee discloses that the inner housing lies adjacent to or on top of the outer housing (Column 7, lines 12-14). Higbee further discloses that the outer housing may be hermetically sealed to prevent unwanted contaminants (such as dirt, dust, or moisture) (Column 4, lines 31-33). Higbee discloses that control electronics are provided in the outer housing (Column 4, lines 36-37). Higbee discloses a lid, which covers the inner housing that contains a circular aperture through which a portion of the ball may project (Column 4, lines 29-30).

Higbee fails to disclose that the electronic components include an optical detector. Higbee also fails to disclose a separating wall comprising an optically permeable region.

Bidiville et al. disclose a sensor (Column 6, line 36). Bidiville et al. disclose a lens that is placed between the ball and the sensor (Column 15, lines 34-36).

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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the sensor and lens disclosed in the patent of Bidiville et al. to modify Higbee.

The motivation for doing so would have been **to overcome the foregoing limitations of the prior art by providing an optical sensing system which eliminates entirely the use of shaft encoders, the encoding wheels associated with shaft encoders, masks or other mechanical elements normally associated with optomechanical pointing devices (Column 2, lines 41-46).**

Therefore, it would have been obvious to combine Bidiville et al. with Higbee to obtain the invention as specified in claim 1.

Regarding claim 2, Higbee discloses that the first housing is hermetically sealed (Column 3, lines 19-21).

Regarding claim 5, Bidiville et al. disclose a transparent window, which further assists in preventing dirt from blocking the optics (Column 15, lines 29-30).

Regarding claim 6, Bidiville et al. disclose that lens may be made up of any optical plastic such as polymethylmethacrylate (Column 15, lines 36-38).

Regarding claim 7, Bidiville et al. disclose that the optical plastic as described above is typically polished (Column 15, line 38).

Regarding claims 11-14, and 16, according to the case law detailed below all the claims read on the prior art in that switching the position of the optical detector does not modify the operation of the device.

**C. Rearrangement of Parts**

In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting

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switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.); In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice).

Regarding claim 18, Higbee discloses a trackerball (Column 1, lines 27-28).

Regarding claim 19, Higbee discloses a mouse (Column 1, line 18).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higbee (EP 0987616 A2) in view of Bidiville et al., US Patent #6,218,659 B1 as documented in claim 1 and in further view of Tada et al., US Patent #6,791,534 B2.

Both Higbee and Bidiville et al. fail to disclose that the second chamber comprises a drainage outlet.

Tada et al. disclose a drain hole used to drain water that has intruded into the trackball (Column 1, lines 46-50).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Higbee and Bidiville et al. to incorporate a drain hole as disclosed in Tada et al.

The motivation for doing so would have been for more versatility.

Therefore, it would have been obvious to combine Tada et al. with Higbee and Bidiville et al. to obtain the invention as specified in claim 8.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higbee (EP 0987616 A2) in view of Bidiville et al., US Patent #6,218,659 B1 as documented in claim 1 and in further view of Chait, US Patent #5,486,845.

Both Higbee and Bidiville et al. fail to disclose that the second chamber contains a cleaning fluid.

Chait discloses a cleaning fluid (Column 4, lines 45-54).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Higbee and Bidiville et al. to incorporate cleaning fluid into the ball chamber as disclosed in Chait.

The motivation for doing so would have been for better ease of operation.

Therefore it would have been obvious to combine Chait with Higbee and Bidiville et al. to obtain the invention as specified in claim 10.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higbee (EP 0987616 A2) in view of Bidiville et al., US Patent #6,218,659 B1 as documented in claim 1 and in further view of Bullister, US Patent #5,751,275.

Both Higbee and Bidiville et al. fail to disclose a processor to apply vector transformations to compensate for the angular position at which the optical detector is mounted.

Bullister discloses that the corrections for non-orthogonal measurement directions which results are compensated by a transformation procedure which can be incorporated into the software device driver (Column 4, lines 21-24)

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Higbee and Bidiville et al. to include the transformation procedure disclosed above.

The motivation for doing so would have been to make operation of the device easier.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higbee (EP 0987616 A2) in view of Bidiville et al., US Patent #6,218,659 B1 as documented in claim 1 and in further view of Nmngani, US Patent #5,541,621.

Both Higbee and Bidiville et al. fail to disclose two optical detectors mounted in mutually orthogonal positions with respect to diametric line.

Nmngani discloses first and second sensors being arranged orthogonal to one another (Abstract).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Higbee and Bidiville et al. to incorporate sensors that are mounted in orthogonal positions.

The motivation for doing so would have been to make the device more effective.

Therefore, it would have been obvious to combine Nmngani with Higbee and Bidiville et al. to obtain the invention as specified in claim 17.

***Allowable Subject Matter***

9. Claims 3, 4 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the references, either singularly or in combination, teach or fairly suggest a specified distance that minimizes the interruptions of the optical detection path due to the presence of liquid in the ball chamber; nor do the references disclose a cleaning fluid inlet or a chamber containing cleaning fluid.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection. Applicant argued that **there is nothing in the Higbee reference to motivate a person skilled in the art to replace the mechanical shafts and magnets described therein with the optical components of the present invention**. Bidiville, the reference that was combined with Higbee does state the motivation to replace the mechanical parts with optical components. Applicant also argues that **significant design changes would be necessary**. Bidiville addresses these design changes for the reason stated above.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Lee whose telephone number is 571-270-3147. The examiner can normally be reached on Mon. - Fri. 7:30AM - 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KBL

  
ALEXANDER EISEN  
SUPERVISORY PATENT EXAMINER